

## CONSTRUCTED RESPONSE #5

- I. WE KNOW THE COORDINATES OF THE POINTS THAT MAKE THE VERTICES OF THE QUADRILATERAL.
- II. FIND THE SLOPES OF THE SIDES OF THE QUADRILATERAL AND DECIDE WHETHER IT IS A RECTANGLE OR PARALLELOGRAM.

$$m_{PQ} = \frac{7}{7} \frac{\text{rise}}{\text{run}}$$

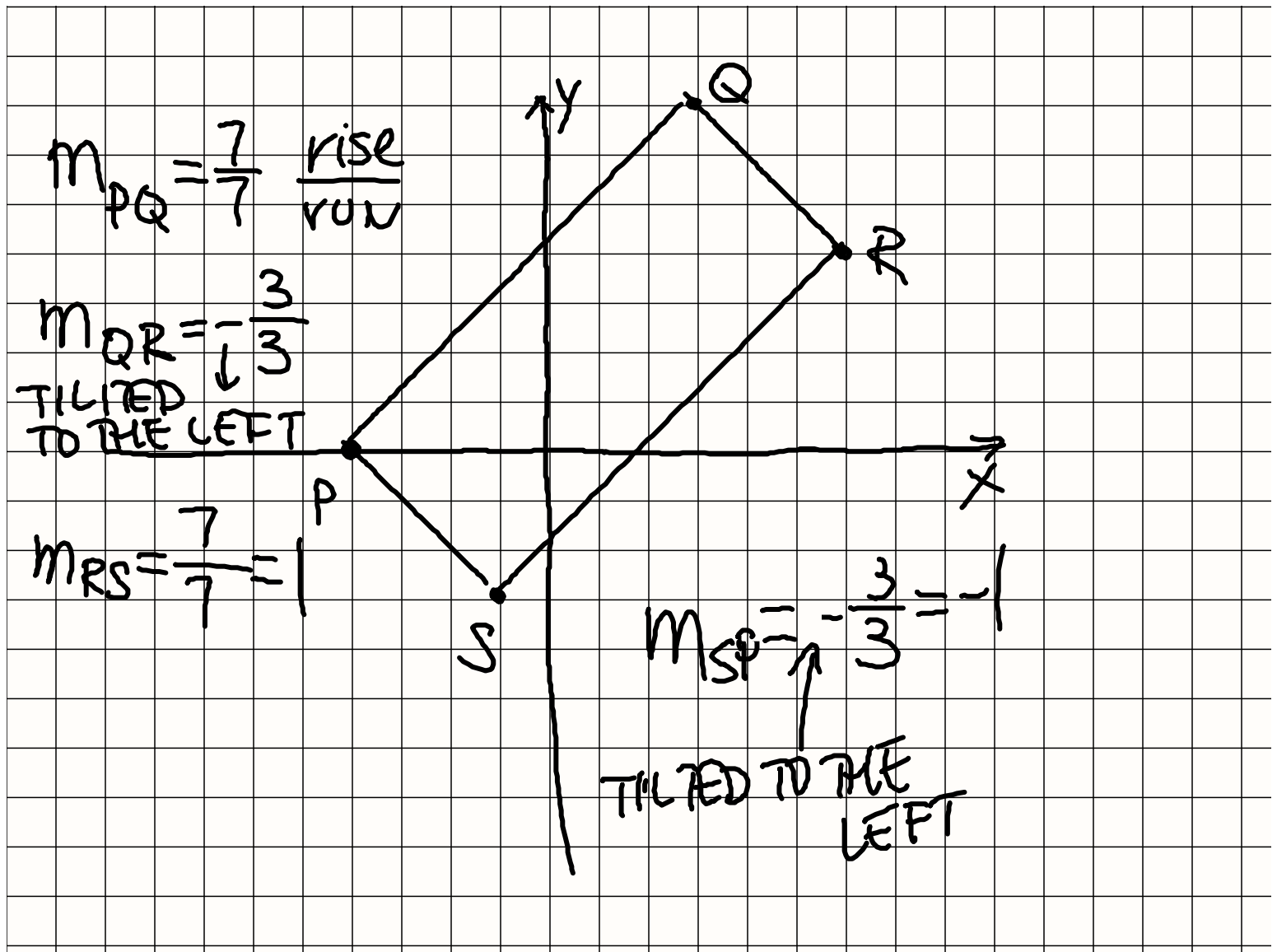
$$m_{QR} = -\frac{3}{3}$$

TILTED  
TO THE LEFT

$$m_{RS} = \frac{7}{7} = 1$$

$$m_{SP} = -\frac{3}{3} = -1$$

TILTED TO THE  
LEFT



OPPOSITE SIDES ARE  
PARALLEL BECAUSE  
THEIR SLOPES ARE  
EQUAL

$$m_{PQ} = m_{RS} = 1$$

$$m_{QR} = m_{SP} = -1$$

ADJACENT SIDES (SHARE  
VERTEX)



HAVE THE SLOPES THAT  
ARE OPPOSITE RECIPROCAALS  
OF EACH OTHER

$$m_{PQ} = -\frac{1}{m_{QR}}$$

$$m_{QR} = -\frac{1}{m_{RS}}$$

$$m_{RS} = -\frac{1}{m_{SP}}$$

THE GIVEN QUADRILATERAL  
IS A RECTANGLE  
(OPPOSITE SIDES ARE  
PARALLEL AND ADJACENT  
SIDES ARE PERPENDICULAR)

WE ARE GOING TO VERIFY  
OUR FINDINGS BY USING  
SLOPE-INTERCEPT FORMULA

$$m = \frac{y_2 - y_1}{x_2 - x_1} \quad m_{PQ} = \frac{7 - 0}{3 - -4} = \frac{7}{7} = 1$$

$$m_{QR} = \frac{4 - 7}{6 - 3} = \frac{-3}{3} = -1$$

$$m_{RS} = \frac{-3 - 4}{-1 - 6} = \frac{-7}{-7} = 1$$

$$m_{SP} = \frac{0 - -3}{-4 - -1} = \frac{3}{-3} = -1$$

WE VERIFIED OUR FINDINGS

IV THE QUADRILATERAL IS  
A RECTANGLE

$$m_{PQ} = 1 \quad m_{QR} = -1$$

$$m_{RS} = 1 \quad m_{SP} = -1$$

m-SLOPE